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My Little Book.

A COMPENDIUM OF USEFUL INFORMATION;

CONTAINING

DESCRIPTIONS, DIRECTIONS, FORMULÆ,
TABLES, RECIPES, etc.



STATESVILLE:
WILL. P. DRAKE, PRINTER.
1879.

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TABLES, RECIPES, etc.

B. J. H. S.

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BY WILLIAM P. DRAKE,
STATESVILLE, WISCONSIN.

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WILL. P. DRAKE, PRINTER.
1879.

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INTRODUCTION.

I do not claim that "My Little Book" contains all the information upon the different subjects of which it treats, but I do claim that there are many books of more than ten times the size of this that are not worth half as much.

Many of the receipts and formulas which it contains have been sold separately for \$1.00, \$2.00 and \$5.00 each, and some of them are worth hundreds of dollars to those who will use them. I have tested most of them myself and have seen nearly all of them in use, therefore I do not guess, but know, that I may with entire confidence hand this little volume to the public and guarantee entire satisfaction to every purchaser. That it may do much good in every household in which it may be introduced is the earnest wish of

THE AUTHOR.

BUILDING HOUSES.

The L fashion or connecting the rear with the front is convenient, but is often at the expense of comfort. In a warm climate we need all the ventilation we can get, and whenever we attach a huge rear part to the front, some rooms are necessarily cut off from any draft. Would it not be well to build our houses but one room deep and, if necessary, build another, or two even, placing them a few feet apart and connecting with corridors so arranged with doors and windows opening down to the floor that they may be thrown completely open in the summer time? Thus a current can be secured to each room. It is difficult to place buildings in such a position as to have no draft through them if doors and windows are opposite each other. By all means two stories, if possible, for the main building, with high steep roof, which permits a well ventilated garret to protect the rooms below it from the sun's heat. Then with windows raised on three sides in the upper chambers one ought to sleep comfortably, and the corridor, if built wide enough, would make a very pleasant dining room all summer, and in winter also if the doors and windows are well constructed so as to close tightly.

The central or main building two stories, and wide passage with stairway. Twelve or fifteen feet distant from either end, a building of one story and same distance or more in the rear, another of sizes to suit wants of family all connected as above, with verandahs added in good taste, will not only be very pretty, but far more comfortable in summer than houses built "all in a heap," and consequently suit a warmer climate much better.

THE MEANS GRASS.

Almost unknown, and generally hated as far as known because of its tendency to spread by the seed, and the difficulty of eradicating it, although all agree that hogs will do it.

It is a rapid grower, particularly on good land, but will grow anywhere, makes a great abundance of good pasture, and if cut

as soon as the seed tops appear, makes good hay, while hogs fatten on the roots, which are about the size of your little finger and resemble cane roots. It has the appearance of corn when young, and cannot be readily distinguished from it. Every seed and every little piece of root will grow. Those who know it best say that on bottoms it can be cut for hay every month during summer, starting early and growing until frost. All kinds of stock, except sheep, eat it with avidity. It would seem that poor land would be better stocked with Means Grass than with broom sedge and clay gullies.

If a whole plantation, or the major portion, were stocked with this grass, a part of it devoted to hay and the rest with all the cattle on it that could be well carried, it would pay many times more per acre than ten bushels of corn, five bushels of wheat, or half bale of cotton with four dollars worth of fertilizer under it. I heard of one man in South Carolina somewhere on the Congaree who was said to be getting rich by cutting three or four crops of Means Grass each season, baling and shipping it. My informant also told me that he was getting six tons per acre. I do not believe it. It is said there are no washes where it grows, whether in bottoms or hillsides, and that the land is permanently improved by it. I have taken much pains to investigate, and believe the above to be substantially correct. One thing more I observed, that it grew as well in the shade as anywhere, except that the leaves were narrower and the stalk thinner. Of course every one must decide for himself whether the advantages outweigh the disadvantages or not. It is perennial. If carefully kept in a field by itself, and not allowed to go to seed at all, it can only spread by the roots, which will be a slow progress. Birds will carry the seed everywhere.

THE COW PEA.

I do not believe this plant can be too highly recommended. Whether for forage, fertilizer, hay or fattening stock, or as a milk producer, the pea answers every call. Why don't every farmer sow all his cornfield with a bushel of peas to the acre at the last working? They will certainly yield six or seven bushels without plowing or any labor except the sowing, and all know they would save just so many bushels of corn, and the hogs would be very

glad to gather them and thank you for the privilege. Where forage is scarce they can be raised successfully on the poorest land and will improve it to the full extent of their cost, and if only fertilized with leached ashes sown broadcast, or with any sort of trash or litter. If you have never done it then try it just once, and see what an amount of good hay can be made from worthless land and the land improved at the same time. Let the pea vines be cut and cured as elsewhere directed, and have fat stock all winter, save corn, and have nice rich milk and plenty of fine butter. Poor milk only makes a sort of white cheesy stuff that is not much more like real butter than a clay bank is like a custard pudding.

HOW TO HAVE PLENTY OF FORAGE WITH LITTLE COST.

Sow peas. Sow peas. They will grow on old field, on bottom and upland, will yield a fair crop of grain or forage, and improve the land as well. In cotton lands oats may be sown to advantage at the last working, and afford splendid winter and early spring pasture, particularly on bottoms, and also prevent the growth of meaner stuff.

HOW TO CURE PEA VINES FOR HAY.

Build a rail pen, place rails across about one foot from the ground, cut the peas and let them wilt, but not long enough to lose the leaves, then haul to the pen and put in loosely as thick as they will bear without heating, say about two-and-a-half feet, put a few more rails across and then more peas. You see the air will circulate *above* and *under* and *through* each layer. Repeat and carry up as high as you please. Cover the pen with anything that will shed all the water, and you will have the best of forage.

CLOVER AND ORCHARD GRASS.

To get a good stand you must understand your soil and climate. Clover does best on soils inclined to red. There is danger of its burning out on sandy soils the first year. It is useless to sow on

poor land. It is not necessary to subsoil sandy land, but clay or clay subsoil should be broken eight inches or more. A plow called "The Southern Renovator" will turn the surface and subsoil at the same time. Clover and grass seed will succeed best with winter oats if sown about first of September, but if the land is at all likely to spue by frost, then sow either on spring oats or winter wheat, first passing a light harrow over it. If manure is not plenty give a good top dressing and harrow in with the grain. Then sow the grass seed. Some put clover seed in with the harrow. On fresh land just cleared never sow clover or orchard grass. Blue grass will do better. To make it thrifty scatter ashes on it just before rain. Leached ashes are good. Give berry bushes saw dust, leaves, or rotten bark; either will help.

SEEDING TO GRASS ALONE.

Last year the writer sowed a piece of fallow ground to orchard grass and clover, on the first day of August. The ground was thoroughly prepared in July, and was top-dressed with short manure harrowed in. Three bushels, 42 lbs. of orchard grass seed, and a half peck of clover were sown, and covered by drawing a smoothing plank diagonally across the harrow marks. This covered the seed evenly and smoothed the ground. The present year one crop of hay, equal to two tons per acre, was taken in May, and the after growth will give a second crop.

PLANT LICE.

Water, with kerosene in it at the rate of a spoonful to a gallon and plentifully sprinkled upon the infested plants, will cause the vermin to emigrate or die.

HOW TO MAKE YOUR OWN FERTILIZERS.

Select a level spot, dig out a little to make it hollow, cut a little ditch out at one side and cover with a plank. Sink a barrel or half barrel in the ground below the level of the outer end of the ditch to catch any drainage from the compost and occasionally dip it out and pour over the top of the compost heap.

Take of stable manure and cotton seed each 850 pounds and

300 pounds dissolved bone. Commence the heap with a layer of stable manure two or three inches thick, then a layer of dissolved bone and then cotton seed, and so repeat until you have made your pile. If you can manage to save all the chamber lye and urine from the stables to wet this compost with pretty thoroughly while it is being put up so much the better. If not, then use water and cover the heap with dry earth or plaster. In about six weeks fermentation will be complete and the cotton seed killed. Careful handling while using will mix it thoroughly. When hauled out it must be put where you want it in the furrow and covered immediately. If at any time you smell it, delay not to cover with dry pulverized earth or plaster. The fine dust gathered in a clay road during summer is excellent.

Get and save all the ashes and apply at the rate of 10 bushels per acre, particularly on sandy land, which is usually more deficient in potash than clay, although it will prove beneficial on both. Calling on more than a hundred farmers who live in two adjoining States, I found but two that had plenty of money, and they made their own fertilizers, or nearly all, buying only a little of the commercial articles to supplement their own. Some have no cotton seed. Very well. Use stable manure, woods mold, muck rich earth. Prepare a goodly heap of mold, muck or trash near the kitchen, and let all slops be poured on it, keeping the rain off. You will be astonished at the number of dollars your kitchen back door can bring. *The heap will need changing occasionally.*

HOW TO MAKE SUPERPHOSPHATE.

In making superphosphate or dissolving bones use three parts water to one of sulphuric acid, pouring the acid slowly in the water and stirring it. *Do not pour water in the acid.* Have some weak lye at hand so that if any of the acid should spatter on your face or hands you can apply the lye immediately and save your skin. If any gets on your clothes you will find a hole there. It takes something strong to dissolve bones. Dissolve sal ammoniac in hot water and mix in hard wood ashes and you will have ammonia. If used in compost, keep well covered with dry earth.

HOW TO MAKE COMPOST.

In composting do not mix the superphosphate with the lime and ashes, but place it between separate layers. The salt and salt-petre had better be dissolved in the water with which the heap is wet. If 600 pounds of cotton seed can be substituted for one portion of the manure in the following formula so much the better. The layers should not be very thick, and care must be taken to have all well mixed when hauled out, and covered immediately. Remember the compost heap should be kept well covered with dry pulverized dirt or earth, for which nothing is better than the scrapings of dust on a clay road. It will absorb and hold more ammonia than anything else, but must be kept dry. If you ever smell the compost heap use dry earth.

A \$5.00 FORMULA.

Stable manure.....	600	pounds
Woods mold or lot manure.....	600	"
Hard wood ashes.....	200	"
Slaked lime.....	200	"
Salt 170, saltpetre 30.....	200	"
Dissolved bone or superphosphate.....	200	"
<hr/>		
	2000	"

The above formula is selling at \$5.00. I have improved it by adding 200 pounds of superphosphate in place of manure.

HOW TO DISSOLVE BONES.

Take 100 pounds of bones beaten into as small fragments as possible, pack them in a tight box with 100 pounds of hard wood ashes, first mixing the ashes with 25 pounds of slackened lime and 12 pounds of sal soda powdered fine. Then add 20 gallons of water to saturate the mass, adding more from time to time as required to maintain the moisture. In a month the bones will be dissolved, when they may be mixed with two bushels of woods mold or of good soil, and after drying are ready to use.

Superphosphate of bone is composed of two parts bones, one part sulphuric acid and three parts water, treated as above, but the soda, ashes and lime are often obtainable when the acid is not.

ABOUT ASHES.

A good rule to follow is never to put ashes in the compost heap for fear they will liberate the ammonia, and that the covering of the heap will not be sufficient to catch it. Scattered broadcast at the rate of 8 to 12 bushels per acre (pine lands a little more, clay lands may do with less), is always a safe way. Tobacco, which is always finest on the gray soils, is not likely to be injured by ashes; but most cultivators would find their account in buying all they can at a reasonable price, remembering that leached ashes are far less valuable than unleached, but leached ashes spread on grass lands have a fine effect. The manurial value of good ashes is not less than 30 cents a bushel.

The following formulæ were prepared by Dr. A. R. Ledoux of the agricultural department of the University of North Carolina, and forwarded by Hon. L. L. Polk, Commissioner of Agriculture:

FORMULA NO. I.

Stable manure.....	800	lbs.
Cotton seed.....	750*	"
Dissolved bone.....	450	"
	2000	

*About 37 bushels.

FORMULA NO. II.

Dry muck, peat, or yard scrapings.....	600	lbs.
Cotton seed.....	600*	"
Acid phosphate.....	600	"
Muriate of potash.....	100	"
Sulphate of ammonia.....	100	"
	2000	

*About 22 bushels.

The muriate of potash and sulphate of ammonia being dissolved in water and used to wet the heap may be applied in the same proportions. For wheat and rye or oats 300 to 400 pounds per acre, it may be harrowed in with the grain.

FORMULA NO. III.

Stable or lot manure.....	500 lbs.
Unburnt marl.....	500 "
Fertilizing salt.....	200 "
Dissolved bones.....	500 "
Sulphate of potash.....	150 "
Sulphate of ammonia.....	150 "

	2000

This formula may be prepared by composting in layers, or mix the marl and salt together thoroughly and apply the mixture as a covering to the compost of cotton seed, stable manure and dissolved bone, then sprinkle with the solution of sulphate of ammonia.

FOR TOBACCO.

Stable manure, mould, &c....	1000 lbs.
Sulphate of potash.....	300 "
" ammonia.....	100 "
" magnesia.....	100 "
Dissolved bone.....	400 "
Land plaster.....	100 "

	2000

REARING CALVES BETTER AND CHEAPER.

Fifty years ago all the calves in New York and Pennsylvania sucked the cows. Now, if for veal, they are fed all the milk they can drink twice a day until four weeks old, when they are slaughtered, and usually weigh about 100 pounds net. The veal is better and fatter at that age than either older or younger. After four weeks they gain in size but not in fatness. The dairymen usually kill their calves the first week, selling the skin and feeding the carcass to the hogs, or if near a city sell the calves to the Irish, who are fond of them at that age. Calves to be reared are never allowed to suck, but the cow is milked and the milk fed to the calf, which is taught to drink in two or three days by holding its head in the bucket with one hand and with the other hand in the milk giving it two of the fingers to suck, holding them just a little apart (only a little) so the milk can pass between them slowly. It will soon drink alone by merely putting its nose

down to the milk. As soon as the milk is good to use it is fed with skimmed milk, and afterwards, by degrees, taught to drink buttermilk by mixing in a little at a time at first, and fine Indian meal may be added, or dish water and meal. With a good, fresh, young grass pasture, at six months you see a big calf.

On the other hand, there are many people in the Southern States who allow the calf to take one-half of the milk all summer. Sometimes there is but one cow to supply the family, but the poor calf must have half. They would not sell any at five cents per quart, but the miserable calf can have a gallon a day, which, at twenty cents per gallon, would be \$1.40 per week, or in 20 weeks \$28.00; and after having been pestered with it all summer and given it so much, (which yet was not half enough for the calf,) it is sold for *two dollars*. How many millions are annually lost by this wasteful management of calves.

TREATMENT OF STOCK.

Whoever beats, kicks, or abuses stock is not fit to be entrusted with their care. I have had cows that would kick the bucket over the fence when first bought that in six months knew their names, would come when called, and stand to be milked without lifting a foot. A mild, firm course, with plenty of good humor and kindness, will generally succeed. Cows should never be made to run either to or from their pastures, no whips allowed and no dogs, unless such as are specially trained to their business. Good treatment pays, with better milk and more of it.

IMPORTANT TO OWNERS OF HORSES.

The following recipe will cure the worst cases of colic in horses: 1½ oz. Laudanum; 2 oz. Salphate Ether; 1 oz. Tincture Asafœtida; ½ oz. Extract Ginger. Shake well and drench the horse.

TO MAKE STOCK WORK MANY YEARS.

If we want horses and mules to die or become worthless in a comparatively short time it is a good plan to feed only with corn, but if they are to live and work to a good old age they must have

plenty of good green food during summer and good hay during winter, with all the salt and cool, clear water they want, and care taken not to have them over-worked when young. When I was ten years old I went to catch a quiet-looking horse, but when pretty near him he put up head and tail and ran away. Chagrined, I returned, and it did not help the matter a bit when uncle said, "that horse you couldn't catch is five-and-twenty years old, and sound as a dollar." Since that I have seen one worked till he was 29 and mules until 35. Good treatment pays. Ground and cut food is much the best.

TO DESTROY WARBLES.

If you wish to protect cattle from the torment of warbles give their backs an occasional bath of pretty strong brine or tobacco water, particularly during and immediately after the fly season, and you will kill the last one.

MURRAIN OR INFLAMMATION.

What is called murrain or distemper in cattle is frequently nothing more or less than inflammation of the stomach, or of the large bowel, and if attended to in its earlier stages is usually susceptible of cure; 20 to 25 or 30 grains of calomel, with same quantity of rhubarb, given every two hours for six or eight hours, and three hours after the last dose give eight ounces of glauber or epsom salts. If there is no operation in two hours repeat the dose, and have the animal moved gently about. If two hours more pass by without evacuations use injections of mild soap-suds or molasses and water freely, still moving the animal about. Evacuations will almost certainly follow. Feed moderately of bran mash or gruel, with good tender grass or sweet hay, or corn fodder, cut and mixed with meal and hot water, stirred and fed when cool for a few days. If the above directions are followed, making due allowance in doses according to age, and not neglecting the use of remedies until the disease has progressed so far as to be utterly incurable, a perfect cure may be expected. Inflammation progresses quite rapidly, and brooks no delay. Remember always that an ounce of prevention is better than a pound of cure.

REMEDY FOR HOG CHOLERA

By one who has often tried it. Shell an ear of corn, soak it in strong lye all night, next morning add half teaspoonful of pulverized copperas, (no more,) mix and feed in a clean trough. Repeat this on the following morning, adding half a teaspoonful of black pepper pulverized. After this give a teaspoonful of black pepper every morning for a week in boiled meal, or boiled meal and beans.

RESULTS.

All the hogs that ate got well, and those that were well did not get sick. The above is a dose for a single full-grown hog. Shoats and pigs should be treated in proportionate quantity.

TO PREVENT OR CURE HOG CHOLERA.

Three bushels of ashes, half a bushel of slackened lime, half bushel salt, ten pounds copperas and a gallon of bran. Mix dry and put in a trough where the hogs can have constant access to it. They will eat it when well, but if at all sick will go straight to it.

2.—To one gallon of tar add four ounces of calomel, one-half pound of copperas and one-half pound of golden seal. Stir the ingredients well, and with a wooden paddle spread lightly upon corn in the ear and give one ear to each hog or shoat every two or three weeks, and oftener when neighbors' hogs are diseased.

3. Confine the hogs in a pen, take crude petroleum and with a common tin sprinkler saturate them from head to foot, also giving it internally on corn. This will also keep them free from lice, and if, in addition, their sleeping places are well sprinkled they will be free from fleas. Do not apply or give it too often. Use your judgment.

4. Give your hogs good, comfortable, clean, well ventilated quarters, with good wholesome food and a plentiful supply of fresh wood ashes and charcoal, with a little salt and occasionally sulphur kept where the hogs can have constant access to it. Keep them free from lice and cholera will not be likely to attack them at all. 5. See your hogs every morning. If one is missing look him up, and if he has the least symptoms of sickness give simple

remedies just as you would a child, only proportion the dose according to size and age. When a hog first rises it will, if healthy, have an evacuation from the bowels soft and mushy. If there is inward fever the excrement, if any, will consist of hard, round balls, for which loosening medicines and change of diet is necessary.

6. One who puts more than 500 hogs on the market every year, and loses none, uses the following prescription, viz: 4 ounces crystallized carbolic acid dissolved in $\frac{1}{2}$ a pint of rain water. Dose, twenty-five drops to each hog, or a teaspoonful to four hogs given in a little slop or milk. If the hog can't eat or drink pour it down. The above has been successfully used 7 years.

LICE AND TICKS.

I have found nothing better than an ointment composed of one pound lard, one pint of kerosene and four ounces of sulphur well mixed and applied with a swab while the hogs are eating, and as often as the vermin manifest their unwelcome presence. Just as good for cows as for hogs.

TO PREVENT OR CURE CHICKEN CHOLERA.

Have comfortable, dry, clean, and well ventilated quarters. A complete change of food as often as practicable. Ground pepper, red or black, always given in all soft food, not too much, but sufficient to season well; a small quantity of copperas dissolved in their drinking water occasionally, say one-eighth pound to a pailful of water, or one ounce to a bucketful.

The natural wants of fowls should be supplied to keep them in health. Gravel, lime, grass, or green food, insects or animal food, are all essential to health. The celebrated "Douglas Mixture" is as follows: One pound sulphate of iron, one pound sulphuric acid, one gallon of water. Give a teaspoonful in each pint of water placed before the fowls to drink, occasionally in health as a preventive, frequently in disease as a corrective. For an internal remedy calomel and rhubarb made into pills of dough or meal, so as to give a single grain or two of each at a dose, will be found efficacious. Pulverized Mandrake Root mixed in their food in moderate quantity is also beneficial.

TO KEEP CLEAR OF LICE.

Give them clean premises, dust-baths to wallow in. Leached ashes are best. Flower of sulphur in litter of nests. The roosting places saturated with coal oil—crude petroleum is best—and have everything about them whitewashed, put on hot if possible. If the vermin are plentiful fumigate with brimstone and rosin. It will be found “an ounce of prevention is better than a pound of cure.

SCALY LEGS

Are produced by insects burrowing under the scales of the legs and eat into them. An ointment composed of one pound lard, one pint kerosene and four ounces of sulphur, being sure to have it well mixed, is a sure remedy. If well done a single application is sufficient. Carbolic acid in proportion of one drop of acid to five drops of water, or spirits of turpentine, will do, but the legs must be oiled or greased afterwards.

SUCCESS

Is assured when all kinds of farm stock are well fed and properly attended. A bountiful supply of good clean water, with yards, pens, stables, and everything about them kept clean, well ventilated and inodorous. A little study and attention to the natural wants of birds or beasts will pay one hundred fold.

POULTRY CHOLERA.

“ Reader,” Montmorency, Indiana, writes the following: “ If you want your chickens to get well of the cholera in two days, use my remedy: Take good clear water and put in a bucket of any kind; then get white-oak bark (that from an old tree is the best,) put it in the water and let it steep until the water is of a copper color, and then pour it in your drinking-vessels or fountain, and do not let the fowls drink any other water. Give them their usual feed, and a cure will be effected in a short time. I have tried this for five years, and it has never failed.”

WINTER EGGS.

If you want plenty of winter eggs raise early pullets, because, if well kept, they will commence laying in the fall, while old hens will scarcely lay many eggs before spring. It is a good plan not to have any hens more than three years old.

HATCHING.

If you want eggs to hatch well put some moist sods in the box to the depth of three inches, in order to preserve some moisture. All know that nests on the ground are the best places for hatching. Imitate them.

TO PROTECT MELON AND CUCUMBER PLANTS FROM THE RAVAGES OF THE YELLOW FLY.

Everybody can have charcoal. Pound it fine as possible. If you have no fine sieve take a finely-woven basket, or even a loosely-woven cloth in which to put the charcoal, and in the early morn. ing when the dew is on shake enough over the plants to blacken them well. I have used it many years and never knew it to fail.

Sometimes they attack the plant at the root, just beneath the surface of the ground. This should be watched, and at the first indication surround the stem of each plant with charcoal dust. The best way to pulverize it is with pestle and mortar.

It is said that radish seed planted with the melon seed is a preventive, because the bugs prefer the radishes and will eat no melons while they can get them.

SURE WAY TO RAISE MELONS.

With a turning plow open a good furrow, going twice through at least. Put in plenty of thoroughly decomposed manure—a good compost is best—then with a subsoil plow go through three or four times, mixing the manure and subsoil thoroughly. Turn the soil back, forming a ridge. This should be done at least a month before planting time. Then open the ridge for the seed and if a little commercial fertilizer mixed with an equal quantity of woods mould be applied, so much the better. Cover or pass a roller over and that part of the work is done. I prefer plant-

ing in drills, because a good stand is secured and all the weakly-looking plants may be either chopped out or pulled up from time to time. The distance of the rows and the distance of plants apart in the rows will, of course, vary considerably in different localities and under different management. Rows ten feet apart and plants three feet apart in the row seems to be nearly right for water-melons, and one-half those distances for musk-melons. It is said by some that the intervening spaces between the rows may be sown in peas, and will prove beneficial to the melons.

GILT-EDGED BUTTER.

Do not imagine for a moment that good butter can be made from poor cows, or in a dilapidated wooden spring-house. Everything about milk and butter must be *perfectly* sweet and clean. Consequently a stone spring-house smoothly plastered and white-washed on the inside, with water-tank so arranged that the water can be kept at proper depth and all parts easily cleaned and well ventilated, with a small chimney having in it a trap that can be closed during the heat of the day and a window or two covered with wire gauze to exclude flies and vermin, and to be opened when cool enough for ventilation, a little stove in one corner to keep it warm in winter and a thermometer whereby to regulate the temperature, the floor being made on solid bottom at least two inches thick of hydraulic lime and sand, and a thin coat of cement to finish. Now, with *good, well-fed cows, proper vessels and management*, you may have "gilt-edged butter."

HOW TO MAKE PORK AT TWO CENTS A POUND.

Nothing can be done with "razor-backs," but half bloods will do pretty well. Essex, or cross of Berkshire and Essex, seem about the best. Have the pigs dropped about first of March, and have a clover pasture (with running water in it, if possible), of sufficient size, according to the number of swine, for their range. Sow plenty of peas, some as early as possible and some later, always having enough and to spare, and as soon as they fairly begin to ripen in the first field turn them in and follow up as sowed until in the last field, which will be those sowed at the last working of the corn. When done with these, feed with corn for two

or three weeks and kill them. If you have managed properly and have castrated all the boars at three weeks old and let the sows alone, with plenty to eat and a little medicine sometimes, as elsewhere directed, every one of those pigs will tilt the beam at two hundred in December. The peas and hogs will improve the land beyond the cost of putting in the crop of peas, and the hog crop is made simply at the expense of a little clover and a little corn. Let every one have his opinion about making cheap pork out West. The "Sunny South" can produce it and ship it there at a profit. Keep no hogs during winter, except brood sows and perhaps a boar, unless you have late fall pigs.

TO MAKE SHEEP PROFITABLE.

If you wish to make them profitable you should see them frequently. During the lambing season twice a day, and always see that they have enough to eat and convenient shelter to protect them from the storms. The cold rains of the South are far worse than the cold dry snows of the North. By judicious crossing with grade rams which cost but little, and with good care a flock can be made to average four pounds of washed wool and very nearly two lambs each. I once raised twenty-three lambs from eleven ewes. All raised twins but one, and she had triplets. The lambs were fat and sold readily at two dollars, add the wool, forty-six pounds, at thirty-five cents—*sixty-two dollars from eleven sheep*. They were a cross of common native sheep by grade rams of the large Merino and Southdown breeds, no ram ever costing more than five dollars. Sheep must always have cleanliness and pure air, with plenty of good food.

SOFT SOAP.

From twenty to twenty-five pounds of grease, according to the size of barrel, with a sufficient quantity of good lye, you can make a barrel of soap.

THE DOLLAR RECIPE.

To four pounds good bar soap one ounce aqua ammonia, one ounce borax, two pounds sal soda. Shave up the soap and put

in six gallons of soft water, bring it to boil, stir till dissolved, then add sal soda. When it is dissolved add the borax and when partly cooled add the ammonia, always stirring it in, and you have 50 pounds of soap.

HARD SOAP.

Seven pounds of sal soda, three of fresh slaked lime, five gallons of water, boiled till dissolved, then allowed to settle, and four gallons clear liquor poured off, to which is added, boiling hot, four pounds of clean grease and two ounces of powdered borax, will make a superior quality of hard white soap.

A LINIMENT THAT NEVER FAILS.

Oil origanum, laudanum, gum camphor and soda, half ounce each, half pint alcohol and one-and-a-half ounces of sal ammoniac. Put origanum, laudanum and camphor gum in alcohol and dissolve all. Then, after having dissolved the soda and sal ammoniac in a little *hot* water, (as little as possible,) mix all together. *This is* to reduce inflammation in man or beast.

LINIMENT NO. 2.

One of the very best liniments ever made for man or beast is composed of equal parts laudanum, alcohol, and oil of wormwood. Its effect to relieve pain is almost magical.

TO RESTORE GRAY HAIR.

Lac sulphur, 2 drams sugar of lead one dram, rose water 8 ounces; mix and apply moderately once a day. This is the "General Twiggs" recipe. I like the following very well, and it is cheaper.

Take a handful of sage leaves, put them in a quart of water, and steep or boil down to a pint. Strain or pour off. Add a tea-spoonful of powdered borax, and as soon as it is dissolved put in a handful of old rusty nails or bits of old rusty iron. Shake up occasionally, and in three or four days it will be ready to use. Not being a dye it does not change the color at once, but gradually. Seem to suit. Chronic gray can only be changed by dyeing.

WHITEWASH.

To keep it from rubbing off take half a pint of flour, make it into a thin paste and stir it thoroughly, with the whitewash in the bucket.

TO TEST FOR IMPURE WATER.

Take seven grains of crystal nitrate of silver, dissolve in one ounce of distilled water, (or take one-half or one-fourth the quantities.) To a tumbler of water from the suspected well add one teaspoonful of the above mixture. If a flocculent precipitate is produced a presence of chlorine is detected. If the precipitate is copious the well had better be closed for repairs.

No. 2.

In any convenient vessel put about a pint of water from the same well, and add an ounce of caustic potash, (in sticks,) boil briskly. Any presence of ammonia may be detected by the smell, as it is evolved during the boiling, and if much, close the well. I have not given the tests for minerals, as a little lime or iron is not considered hurtful.

MANDRAKE.

When convalescent from bilious attacks many people complain for want of appetite. A little mandrake root eaten in small quantities, say about half an inch in length, during the day is usually effectual in correcting the difficulty. It acts mildly on the liver and digestive organs, being a splendid alterative. Perhaps, if used in time, it might prevent many bilious difficulties. Mandrake Pills are advertised at twenty-five cents per box; but twenty-five cents worth of root will make twenty-five boxes of pills. It is called "May Apple Root" by some. It should be dried beforehand, as the green root might be too rank. Of course any one can pulverize it and make pills, if desirable.

BATTERY.

A good galvanic battery can now be procured at quite moderate cost, and for many cases of rheumatism, neuralgia, partial

paralysis and torpid liver acts like a charm, requiring no medicine, or but little of it, and causing no ill effects. Useless limbs have been completely restored to their normal functions. Severe neuralgia has been cured in five minutes. Torpid livers that successfully defied all medical treatment for years have been completely cured in a few weeks. Like many other remedies, it sometimes acts like a charm and sometimes fails altogether.

It will be very likely to fail in the hands of an inexperienced person. I have cured bad cases of rheumatism at two sittings.

A COTTON-SEED PLANTER

Saves much time and about one-half the seed. It opens the drill, distributes the seed, and covers it well; at one operation. Cotton is so cheap it must be more cheaply made. Where fertilizer is used it is best put in by a distributor; but all commercial fertilizers must necessarily give way for home-made compost.

GOOD GARDEN.

There is no use in trying to have a good vegetable garden without plenty of well decomposed stable manure. A soil deeply loosened by spade, or subsoil plow and frequent, thorough cultivation. But we must be careful not to disturb the growing roots. Irish potatoes have been ruined by close plowing and cutting of the setts. Yet they should be well plowed and thickly covered to prevent injury from the sun's heat. Let the plow be run just outside the roots. Where the ground is inclined to bake let it be underdrained. Dusting the roots of cabbage plants with fine bone dust is the best remedy we have so far for ravages of the cabbage fly; and it is not a certain remedy.

Be very careful to save all the chicken manure, because every pound of it is worth three pounds of guano; but it must be kept out of the rain and mixed with three times its own bulk of woods mold, or rich earth, before using. Mixing with ashes will destroy it by liberating the ammonia.

TO STOP HINGES FROM CREAKING.

A little soft soap put on barn door or gate hinges will prevent their creaking. But one application is needed. Try it.

"STIR THE SOIL."

"If I had to preach a sermon on horticulture," says Downing, "I should take this for my text," stir the soil." In dry weather it is very essential that the soil be stirred often. The air waters the fresh-dug soil much more effectually than we can do.

A man will raise more moisture with a spade and a hoe in a day than he can pour on the earth out of a watering pot in a week. If the ground be suffered to become close and compact, the cool surface exposed to the air for the reception of moisture is smaller, and what is deposited does not enter into the earth far enough to be appropriated; but if the soil be loose and porous the air enters more deeply and deposits its moisture beneath the surface. Almost any soil in which a seed will germinate may be made by continued hoeing to produce a crop. Above all, cut away every weed that appears. "One year's seeding makes seven year's weeding." The only use of weeds is to make a necessity of tilling the ground more frequently.

EAR-ACHE.

There is scarcely any ache to which children are subject so bad to bear and difficult to cure as the ear-ache. But there is a remedy never known to fail. Take a bit of cotton batting, put upon it a pinch of black pepper, gather it up and tie it, dip in sweet oil, and insert it into the ear. Put a flannel bandage over the head to keep it warm. It will give immediate relief.

TO CURE A FELON.

The London *Lancet* suggests the following simple treatment for felons: "As soon as the disease is felt put directly over the spot a fly blister, about the size of the thumb-nail, and let it remain for six hours, at the expiration of which time, directly under the surface of the blister may be seen the felon, which can instantly be taken out with the point of a needle or a lancet." A piece of adhesive plaster will keep the blister in place.

REMEDY FOR POISON BY IVY.

It seems to me that I read all kinds of cures for ivy poison

except the right one. I have always endeavored to keep it before the public, but have failed. It is to dissolve sugar of lead—a bit the size of a hazelnut—in half a teacup of sweet milk or warm water. Apply as warm as can be easily borne with a soft, liny piece of linen rag. Three or four applications are sufficient to effect a cure. If the poison is on the face and nearing the eyes or mouth, this astringent wash may be constantly applied. It is a marvelous cure, and by watching closely one can see the severed blisters turn from white to yellow during the application. This remedy for ivy poison should prevent a good deal of suffering. It is well where a member of the family is easily poisoned to keep sugar of lead in the house all the time. Let it be labelled and kept where it can be found the moment it is wanted. Keep it well wrapped up, that it may not lose its strength.—*Cor. Ohio Farmer.*

HOW TO GET RID OF HOUSEHOLD PESTS.

Mercury extrminates flies and bugs, but I think cleanliness the best and perhaps the only preventive. The common housefly I do not molest, believing that it more than compensates for its trouble by clearing the atmosphere of effluvia and the animalcules which always arise from the putrefaction of decaying substances during warm weather.

For the residue of insects that infest my vegetable garden, I find that the laboratory of the chemist furnishes materials fatal to them all, among which white hellebore and cayenne pepper are of the most utility. The bug or worm which cannot find vegetation unflavored with these articles will seek its breakfast elsewhere and leave a garden unmolested.

A few drops of carbolic acid in a pint of water will clean house plants of lice in a very short time. If mosquitoes or other blood-suckers infest our sleeping rooms at night, we uncork a bottle of pennyroyal, and these insects leave in great haste, nor will they return so long as the air in the room is loaded with the fumes of the aromatic herb. If rats enter the cellar, a little powdered potash thrown into the holes, or mixed with meal and scattered in in their runways, never fails to drive them away.

TAKE CARE OF YOUR IMPLEMENTS.

A great many farmers are constantly grumbling about the high prices of farming tools, asserting that the purchasing of such implements as they want keeps them continually in debt. So it does; but let us see where the fault lies. Our business takes us over the whole country, and we think we can safely say that not one farmer in ten takes decent care of his farm tools. Every day we see some implement lying just where it was last used, exposed to rain or snow. We have seen Mowers and Reapers left on the bottoms and in sloughs where they were used last, with the ice up to the hubs, frozen in solid. We have seen farmers plow up to their Mower, or Harvester, then move it on to the plowed ground instead of taking it under a shed, and go on with their work. And we have seen plows left in the ground just where a cold snap happened to stop their plowing. Such farmers need never expect to succeed. If they are *slack* in one thing, they are most always so in everything. The trouble is *not* that you have to pay so much, but that you have to pay so often. If you have no shed, buy five dollars worth of lumber, get four posts, stick them in the ground, and put hay enough on top to keep the rain and snow off your tools. Then oil over all steel or iron work to keep it from rusting, and your tools will last five times as long as they will otherwise. If, however, this is too much trouble, you can leave your tools out where they can rust and rot, and every year or two you will have to buy a new supply. E. Root.

RECEIPT WORTH ONE THOUSAND DOLLARS.

The Ohio *Cultivator* says the following receipt is worth one thousand dollars to every housekeeper:

"Take one pound of sal soda, and half a pound of unslacked lime and put them in a gallon of water, boil twenty minutes, let it stand till cool, then drain off and put in a small jug or jar, soak your dirty clothes over night or until they are wet through, then wring them, and rub plenty of soap and water, add one tea-cupful of the washing fluid; boil half an hour or more, rinse, and your clothes will look better than by the old way of washing twice before boiling. This is an invaluable receipt, and every poor, tired woman should try it."

FOR BAD BREATH.

For bad breath here is a recipe: Three hours before breakfast take a teaspoonful of the following mixture: Chlorate of potassa, two drachms; sweetened water four ounces. Wash the mouth occasionally with the same mixture, and the breath will be as sweet as an infant's of two months.

GLUE,

Melted as usual, will keep liquid when cold, if a few drops of nitric acid are added to it. This is Spalding's Liquid Glue, and is very handy, if always kept in the house.

ABOUT CHILDREN.

Children are children as kittens are kittens. A sober, sensible old cat, that sits purring before the fire, does not trouble herself because her kitten is hurrying and dashing here and there, in a fever of excitement to catch its own tail. She sits still and purrs on. People should do the same with children. One of the difficulties of home education is the impossibility of making parents keep still; it is with them, out of their affection, all watch and worry.

PERPETUAL MOTION.

He said, "I have discovered perpetual motion." "Let's see it," "let's see it," they all cried. He showed them the baby.

TO PRESERVE POSTS.

The *American Chemist* says that a Western farmer discovered many years ago that wood could be made to last longer than iron in the ground. Time and weather, he says, seem to have no effect on it. The posts can be prepared for less than two cents a piece. This is the recipe: Take boiled linseed oil and stir into it pulverized charcoal to the consistency of paint. Put a coat of this over the timber, and, he adds, there is not a man who will live to see it rot.

BAG-MARKING INK.

A correspondent of the *English Mechanic* gives the following recipe for an ink, the permanency of which he says is perfect, even when bags filled with chemical manures have been in rain and sunshine for ten days : Boil 1 lb. of logwood chips in 1 gallon of water, at boiling point, ten minutes ; then stir in the eighth of an ounce of bichromate of potash, and boil this ten minutes longer ; then add, when cold, $\frac{1}{2}$ lb. of common gum, dissolved, and stir well in. This will flow well from the pen, and will mark bags with either the stencil plate or block. The cost of the above ink is about 12 cents per gallon.

PAINT FOR FARMERS.

A writer states that farmers will find the following profitable for house or fence paint : Skim milk, two quarts ; fresh slaked lime, eight ounces ; linseed oil, six ounces ; white Burgundy pitch, two ounces ; Spanish white, three pounds. The lime is to be slaked in water exposed to the air, and then mixed with about one-fourth of the milk ; the oil in which pitch is dissolved to be added, a little at a time, then the rest of the milk, and afterwards the Spanish white. This is for white paint. If desirable, any other color may be produced ; thus, if a cream color is desired, in place of part of the Spanish white use the ochre alone. Farmers wishing to economize in painting fences, or temporary structures, will probably find the above valuable.

AN EFFECTUAL SCARECROW.

Decidedly the best scarecrow that has ever been tried is made by taking a medium size, egg-shaped potatoe, sticking into it long wing feathers from chickens at each side, for wings, and others spread out, fan-shaped, at one end for a tail. A wooden head may also be whittled out and stuck on, making the whole look like a large bird. By sticking a peg in the back, to which a string is tied, and suspending it from a cross piece on a high pole, all birds will be effectually frightened off, as they will take it for a hawk. One in a field or vineyard of considerable size will fully answer the purpose.

WET GRAIN.

Many farmers are vexed and tired with wet and damp grain and others are deterred from threshing out of the shock, from their fears of injury to the grain while in the bin.

The remedy for these troubles is a few stones scattered through the bin, or better yet, a few bricks. They will absorb the moisture, and the grain will come out like shot. Try it, brother farmers ; there is no patent on it.

GUNS AND RIFLES

May be easily cleaned from lead by the following : If a muzzle-loader, stop up the nipple or communication hole with a little wax, or, if a breech-loader, insert a cork in the breech rather tightly ; next pour some quicksilver into the barrel, and put another cork in the muzzle, then proceed to roll it up and down the barrel, shaking it about for a few minutes. The mercury and the lead will form an amalgam, and leave the barrel as clean and free from lead as the first day it came out of the shop. The same quicksilver can be used repeatedly by straining it through wash leather; for the lead will be left behind in the leather, and the quicksilver will be again fit for use.

HOW TO CLEAN A TEA OR COFFEE POT.

If the inside of your tea or coffee pot is black from long use, fill it with water, throw in a piece of hard soap, set on the stove and let boil from half an hour to an hour. It will clean as bright as a new dollar and cost no work.

STONE JARS

Which have become offensive and unfit for use, may be rendered perfectly sweet by packing them full of earth and letting them stand two or three weeks.

TO REMOVE FRECKLES.

Strain horse radish into a cup of cold sour milk ; let it stand

twelve hours, strain and apply two or three times a day. Or, mix lemon juice, one ounce; pulverized borax, one-quarter drachm; sugar, one-half drachm; keep a few days in a glass bottle, then apply occasionally.

BUSINESS TABLES.

HOW TO LAY OFF A SQUARE ACRE OF GROUND.

Measure 209 feet on each side, and you will have a square acre, within an inch.

CONTENTS OF AN ACRE.

An acre contains 4,840 square yards.

A square mile contains 640 acres.

LAND MEASURE.

144 square inches.....	1 square foot.
9 square feet.....	1 square yard.
30 $\frac{1}{4}$ square yards.....	1 square rod.
40 square rods.....	1 square rood.
4 square roods.....	1 square acre.
640 square acres.....	1 square mile.

MEASURES OF DISTANCE.

A "Sabbath-day's journey" is 1,155 yards—(this is eighteen yards less than two-thirds of a mile).

A "day's journey" is 33 $\frac{1}{3}$ miles.

A cubit is two feet.

A great cubit is 11 feet.

A palm is 3 inches.

A span is 10 $\frac{1}{4}$ inches.

A pace is 3 feet.

Death is a black camel that kneels before every door.

LONG MEASURE.

12 inches.....	1 foot.
3 feet.....	1 yard.
5½ yards, or 16½ feet.....	1 rod.
320 rods, or 1,760 yards, or 5,280 feet.....	1 mile.
3 miles (measuring at sea).....	1 league.
6 feet (depth of water).....	1 fathom.
4 inches (horse measure).....	1 hand.

LIQUID MEASURE.

4 gills.....	1 pint
2 pints.....	1 quart.
4 quarts.....	1 gallon.
31¼ gallons.....	1 barrel.
63 gallons.....	1 hogshead.

COMMERCIAL WEIGHTS.

16 drams.....	1 ounce.
16 ounces.....	1 pound.
25 pounds.....	1 quarter.
4 quarters.....	1 hundred weight.
20 hundred weight.....	1 ton.



MISCELLANEOUS TABLE.



12 units, or things.....	1 dozen.
12 dozen.....	1 gross.
20 things.....	1 score.
196 pounds.....	1 barrel of flour.

200 pounds.....	1 barrel of pork.
56 pounds.....	1 firkin of butter.
24 sheets of paper.....	1 quire.
20 quires of paper.....	1 ream.
4 feet wide, 4 feet high, and 8 feet long.....	1 cord of wood

FURNITURE POLISH.

Equal proportions of turpentine, linseed oil and vinegar, thoroughly applied and then rubbed with flannel, is an excellent furniture polish.

OLMSTED'S VARNISH,

Made by melting one part of rosin with ten parts of lard, will prevent rust or corrosion on sheet iron or other metal to which it is applied.

LEGAL NUMBER OF POUNDS PER BUSHEL.

Apples, dried.....	24.
Bran.....	20.
Beans, white.....	60.
Buckwheat.....	.52.
Charcoal.....	.22.
Corn, shelled.....	56.
" ear.....	70.
Corn meal.....	48.
Dried peaches.....	23.
" " pared.....	33.
Grass seed, blue.....	14.
" " clover.....	.60.
" " orchard.....	14.
" " red top.....	14.
" " timothy.....	.45.
" " millet.....	.50.
Middlings, fine.....	40.
" coarse.....	30.
Oats.....	.32.

Onions.....	.....	56.
Potatoes.....	.....	60.
" sweet.....	.....	55.
Wheat.....	.....	60.
Rye.....	.....	56.
Salt.....	.....	50.
Turnips.....	.....	55.
Lime.....	.....	80.

USEFUL TABLE.

QUANTITY OF SEEDS REQUIRED PER ACRE

Wheat.....	.....	1½ to 2 bushels.
Rye.....	.....	1½ "
Oats.....	.....	2 "
Barley.....	.....	2 "
Peas.....	.....	1 to 2 "
White Beans.....	.....	1½ "
Buckwheat.....	.....	½ "
Corn, broadcast.....	.....	4 "
Corn, in drills.....	.....	1 to 2 to 3 "
Corn, in hills.....	.....	4 to 8 quarts.
Broom Corn.....	.....	½ bushel.
Potatoes.....	.....	10 to 15 "
Beets.....	.....	3 pounds.
Carrots.....	.....	2 "
Ruta Bagas.....	.....	¾ "
Millet.....	.....	½ bushel.
Clover, white.....	.....	4 quarts.
Clover, red.....	.....	5 "
Timothy.....	.....	6 "
Orchard Grass.....	.....	1 to 2 to 3 bushels.
Red Top.....	.....	1 to 2 peeks.

A CERTAIN CURE FOR CHILLS.

Take 20 grains quinine, 20 drops turpentine, 20 drops tincture of iron. Mix, and take one-half 4 hours before the chill comes,

and 2 hours before chill time take the other half. Then every 7th, 14th and 21st day take the same quantity 3 hours before chill time.

NO. 2.

Quinine 20 grains, pulverized alum 2 drams, water 1 ounce, sulphuric acid 20 drops, good brandy 3 oz. First dissolve the quinine in the water, add the acid, then add the alum and brandy. Dose : A tablespoonful for a full-grown person every one, two, or four hours during intermission. This remedy rarely fails.

BUCKEYE PILE OINTMENT.

Take half a dozen buckeyes, remove the shells, bruise and stew in half a pint of lard slowly for an hour or two, strain, and when cool add two ounces of citrine ointment and mix well. This is a very successful pile remedy.

HEALING SALVE.

Rosin and beeswax each 2ounces, sweet oil or tallow 8 ounces. Melt all together. Pour it into a bucket of cold water, pull and work it same as candy, and make into balls. It will keep forever, is good for all common sores, and can be used for grafting wax or sealing fruit cans.

VERMIFUGE CANDY.

Make a strong decoction of sage 2 parts and of worm seed 1 part. Strain and boil down, adding sugar enough to make it into candy. This is the same preparation that is sold at 50 cents per box, or for 2 dollars a pound.

BURNS.

For burns apply lime water and sweet oil, equal parts, with a feather. Then sprinkle with wheat flour so as to cover completely the burnt part. We know of nothing that will relieve the pain more rapidly.

BRUISES

May often be healed by a liberal application of beef brine, wormwood or tansy lotions, or strong decoction of mullen leaves are also good.

WOUNDS

Should be washed twice a day with clean soft water and a little castile soap added, then rub with whale oil, which will keep off the flies. In its absence lard will do.

Wounds from the saddle are best healed with white lead moistened with sweet oil or milk. The saddle should be taken off and the horses back washed at every baiting.

THE FARMERS' FRIENDS.

The swallow, swift, and nighthawk are the guardians of the atmosphere. They check the increase of insects that otherwise would overload it. Wood peckers, creepers and chickadees are the guardians of the trunks of trees. Warblers and flycatchers protect the foliage. Blackbirds, thrushes, crows and larks protect the surface of the soil; snipe and woodcock the soil under the surface. Each tribe has its respective duties to perform in the economy of nature; and it is an undoubted fact that if the birds were all swept away from off the earth, man could not live upon it, vegetation would wither and die, insects would become so numerous that no living thing could withstand their attacks. The wholesale destruction occasioned by the grasshoppers, which have so lately devastated the West, is undoubtedly caused by the thinning of the birds, such as grouse, prairie hens, etc., which feed upon them. The great and inestimable service done to the farmer, gardener and flourist, by the birds, is only becoming known by sad experience. Spare the birds and save your fruit; the little corn and fruit taken by them is more than compensated by the vast quantities of noxious insects destroyed. The long persecuted crow has been found, by actual experiment, to do far more good, by the vast quantity of grubs and insects he devours, than the little harm he does in the few grains of corn he pulls up. He is one of the farmers' best friends.

ODORLESS PRIVIES.

They may be very easily kept free from any disagreeable odor by the use of fine dry earth. The fine dust on clay roads cannot be excelled. Clay dust is far superior to sand; but dry pulverized earth of any kind will do. Place a barrel full of it in the corner with a tin cup holding half a pint, and have every one using it throw a cup full of the dry dust over the deposit immediately. No odor will ever be perceptible, and the contents may be removed at any time without offence and be put into the compost heap. This is substantially the old plan which the children of Israel were commanded to adopt when on their journey through the wilderness. It has never been excelled.

SUBSOILING.

When I see the gardens dried up and the corn withered because of shallow cultivation, the question, why don't people plow deeper? naturally suggests itself.

Early in the spring, that was followed by one of the driest seasons, I plowed and subsoiled about six acres of poor old field and planted in corn, with no manure but a little leached ashes, and with good cultivation it made a fair crop, while all around the upland corn was dried up and produced little or nothing. The corn was followed with oats and clover, without manure. Result, a good crop of oats and good stand of clover; and two years afterwards this land produced more corn per acre than the bottom lands beside it. I attribute all these good results to the subsoil plow. I then used two plows and two teams, of course. I have since made a combination of the turning and subsoil plows by which one man and team do both effectually. I find that two horses will pull two six-inch plows (one above the other) very well. Mine are adjustable, and can be easily set to run at any desired depth.

BEWARE OF PATENT COW-MILKERS.

They will ruin the cows. Anything inserted in the teat will cause inflammation.

TO GET A GOOD STAND OF GRASS.

In my opinion the very best way to get a good stand of grass is to have the land well plowed and pretty well covered with short manure, to be harrowed in with the seed (winter oats) late in August, and follow with two bushels of orchard grass and ten pounds of clover to the acre, and hitch to a plank a little more than one-third of the way from one end, which will cause it to run diagonally across the harrow tracks. This will cover the seed sufficiently, or a light brush may be used. The crop of oats, clover and orchard grass will all come together the next year, and if you have done your work well the crop will be enormous, and need cutting just when the clover tops fairly commence dying, not when they are dead. You will get a good pasture or another cutting in the fall. Never keep grass pastured down short. Let it grow up a little occasionally. It will pay better and give it a breathing spell. Except where there is a sandy or alluvial subsoil clover will do much better if the land is well and deeply broken with a subsoil plow.

Nothing better for tobacco than plenty of hard wood ashes. Many think that with plenty of ashes and a little good compost sandy old fields are better than fresh land.

GIANT FRUIT DRYER.

Build it like a tobacco barn, about twelve feet square; place a door in the middle of one side and leave an open passage to the opposite wall. On each side of the passage erect racks to support the frames, one or more tiers, as may be required, which should be at least a foot above each other to allow a free circulation of air. Make the frames of laths three feet square, or two by three feet, and stretch across them coarse brown sheeting, drawing each way tightly with a strong thread. It may be tacked on, but will need taking off and washing occasionally. Have plenty of frames so the fruit may be evenly and thinly spread. Have a well-constructed flue that will not permit the escape of any smoke in the building, and do not raise the heat high enough to make the fruit crusty, because that will injure it. Find what part is coolest and place the fresh fruit there, removing others as it dries to the warmest place. You can dry in first-class style in any weather apples, peaches, pumpkins, sweet potatoes, beans, corn, or tomatoes, and

thus secure the highest prices. Probably if you allow a little fresh air to enter just over the flue it may be of advantage; but that will depend on the tightness of your house. Good fruit and good management will pay.

Remember that ants are disgusted with coal oil.

BARNs AND STABLES GOOD AND CHEAP.

They are as necessary at the South as anywhere. If there is less necessity for housing stock there is more for making and saving manure, every bit of which should be kept under cover, either in boxstalls, where it may be left until wanted for compost on the field or thrown out from the stables under a cheap roof, which need not be quite tight. Barns are also necessary for preserving grain, straw, hay, fodder, shucks, &c., and for convenience in feeding. The saving of time and material will pay the cost of a good barn every two years. The following plan, simple, cheap, convenient and durable, has been found to come nearer suiting everybody than any other: A frame 40 or 42 feet wide, and as long as desired. An 18 feet floor through the middle, with a loft high enough so you can drive through with any load; on either side stables, with mangers or troughs next the floor. Forty feet gives you 11 foot stables, 42 feet 12 foot stables, or the stables may be wider on one side if desired. You may have box-stalls or stanchions or tie-chains, and can do all feeding, cleaning and milking without once going out of doors. The corner posts should be 16 feet long, so as to give plenty of loft-room. For cow stables $6\frac{1}{2}$ feet high is sufficient. Horse stables a little higher. The timber should be of sufficient size and properly framed to stand the weight within and storms without. Plan and specification furnished on application.

MY LITTLE BOOK

Would fall short of its mission if I should fail to add some practical truths in regard to our dearest and most important interests. We may have pleasant surroundings; our barns may

be full and our store-houses overflowing ; we may have elegant horses, fat cattle and fine sheep ; we may even be finely clothed and " fare sumptuously," yet if we do not attend to our soul's interests there remains for us only an eternity of remidless woe. I have been one of the wicked men of the world, and I daily bless that abounding grace which enables me to depart farther and yet farther from all evil, to seek peace and pursue it. Therefore, with a few other thoughts, I respectfully hand you

"MY CREED."

I will watch closely and do no evil; but constantly learn to do well. I will wrong no one. I will defraud no one. I will covet no man's silver or gold, or anything that he possesseth, and will do good to all, as I have opportunity, fully believing and trusting in the Triune God for all things that may be necessary for me in this world and in the world to come. Loving all, forgiving all, without malice and without hypocrisy, now, hereafter and forever. And to obtain power and grace to do all these things I will ever pray God, for his Son's sake, to grant me all I need; for He will do it.

"This is a faithful saying, and worthy of all acceptance, that Jesus Christ came into the world to save sinners, of whom I am the chief."

HEREAFTER.

Ingersoll says "we are commanded to love our enemies. God roasts his."

God says "depart," but that means simply go to your own place; the home you have preferred and chosen. It might almost be called a matter of taste. Some insist that all is heaven in the spirit land. Suppose all the thieves, liars, swearers, adulterers, murderers, idolaters, all the jail birds, all the penitentiary inhabitants and all the gallows fruit was to go there unrepentant, would not heaven be a hell of a place ?

TRUE REPENTANCE.

Sorrow for what is wrong.

Contrition, from *contrero*, to rule or bruise, with sorrow. Remorse, from *remordes*, to have a gnawing pain. Contrition may be a long and severe sorrow. We repent of a bad bargain, or of not making a good one. Altamout had remorse when looking his crimes in their faces. He said, "and is there another hell? O thou indulgent Lord God, hell itself were a refuge could it hide me from thy frown." Repentance is to have such sorrow for sin as produces newness of life. It is forsaking of sin, forsake, abandon, relinquish; let go; turn from it. Repentance toward God is God-given, and has but one meaning, viz: Sorry *for*—to the forsaking of sin—and there is no change of mind where there is no change of way. A legal repentance may change the outward life, but true repentance leads directly to change of heart and life, and by justification snatches the gnawing pain from the iron grasp of a deadly remorse. Godly sorrow for sin is pain in the soul for sin, on account of sin, because offensive to God. It appears by carefulness to search out what is wrong, and by fear to continue in sin. In vehement desire to get rid of sin, and utterly loathing one's self finally on account of sin. Heart-rent—pricked to the heart—mortals. Paul says "I died." All my good opinion and confidence failed. This necessarily induced some action. "Men and brethren, what shall we do?" Ready to be or do anything so the terrible load be lifted. Thank God it may be, but we cannot ask in faith forgiveness of God, while we indulge in resentment against any or hatred of our neighbor. He stands before us next to God. True repentance is convincing of sin. Confession of it, sorrow for it, hatred to it, and renunciation of it. Author of repentance, God; subjects, sinners; means, the word and the Spirit, sometimes afflictions; steps up to heaven, penitence, prayer, pardon, peace, purity, praise. Hearty, earnest, determined, continuous prayer will sooner or later bring every blessing, remove all fear, give perfect confidence, and cause the gates of Paradise to swing wide open for the entrance of every faithful soul.

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